

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A radiant heat transfer panel for engagement adapted to communicate with a fluid conduit comprising:

a formed tray;

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said tray defining a thermal volume containment space and a conduit channel;

said volume space containing a thermal mass;

said channel, volume containment space and thermal mass configured and arranged to permit heat transfer between said conduit channel and said thermal mass.

2. (currently amended) The radiant heat transfer panel set forth in claim 1, wherein said conduit is plastic tubing; thermal mass has outer and inner surfaces and said conduit channel extends into said thermal mass from said inner surface.

3. (currently amended) The radiant heat transfer panel set forth in claim 1, wherein said tray comprises a composition selected from a group consisting of polyvinyl chloride, polyethylene, polybutylene or and thermoplastic material.

4. (original) The radiant heat transfer panel set forth in claim 1, wherein said tray comprises a fixture tower.

5. (currently amended) The radiant heat transfer panel set forth in claim 1, wherein said tray in-

cludes comprises a side gusset.

6. (original) The radiant heat transfer panel set forth in claim 1, wherein said conduit channel is a U-shaped trough.

7. (original) The radiant heat transfer panel set forth in claim 1, wherein said conduit channel is cylindrical.

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8. (original) The radiant heat transfer panel set forth in claim 1, wherein said conduit channel comprises a linear section.

9. (currently amended) The radiant heat transfer panel set forth in claim 1, wherein said conduit channel comprises an arcuate section.

10. (currently amended) The radiant heat transfer panel set forth in claim 1, wherein said thermal mass comprises a composition selected from a group consisting of cement, mortar, ceramic, concrete or and stone.

11. (original) The radiant heat transfer panel set forth in claim 1, wherein said thermal mass has an outer surface and said outer surface is textured.

12. (original) The radiant heat transfer panel set forth in claim 1, wherein said thermal mass has an outer surface and said outer surface is a finished flooring surface.

13. (currently amended) A The radiant heat transfer panel set forth in claim 6, wherein said space is open on a first side of said tray and for engagement with a conduit comprising:
a thermal mass;
said thermal mass having a conduit channel;
said conduit channel is open on a second side of said tray opposite said first side, configured and arranged to permit heat transfer between said conduit and said thermal mass;
whereby heat radiates from said panel.

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14. (currently amended) A radiant heat system comprising:

multiple radiant heat transfer panels;
each of said panels having a thermal mass comprising a formed tray defining a containment space and a conduit channel, said space containing a thermal mass;
a fluid conduit;
said conduit communicating with an apparatus for heating said fluid a fluid flowing through said conduit;
said multiple panels positioned adjacent each other such that said conduit extends through a series of said conduit channels;
said panels, conduit and apparatus so configured and arranged to permit heat transfer from said fluid to said thermal mass of said panel;
whereby heat radiates from said panels.

15. (currently amended) The radiant heat system set forth in claim 14, wherein said panel further comprises a formed tray: thermal mass has outer and inner surfaces and said conduit channel extends

into said thermal mass from said inner surface.

16. (original) The radiant heat system set forth in claim 14, wherein said fluid is water or glycol.

17. (original) The radiant heat system set forth in claim 14, and further comprising an attachment spacer.

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18. (original) The radiant heat system set forth in claim 17, wherein said attachment spacer is wood.

19. (original) The radiant heat system set forth in claim 14, and further comprising an edge spacer.

20. (original) The radiant heat system set forth in claim 14, and further comprising a over-layer having a finished surface.

21. (currently amended) The radiant heat system set forth in claim 20, wherein said finished surface is a flooring surface selected from a group consisting of wood, carpet, tile or and laminate.

22. (original) The radiant heat system set forth in claim 14, and further comprising an under-layer.

23. (original) The radiant heat system set forth in claim 22, wherein said panel is attached to said under-layer by mechanical bond or by mechanical fastener.

24. (currently amended) The radiant heat system set forth in claim 14, and further comprising an

attachment spacer and an over-layer and, wherein said over-layer is attached to said attachment spacer by mechanical fastener.

25. (original) The radiant heat system set forth in claim 14, wherein said multiple panels define an outer perimeter and said outer perimeter is immediately adjacent a standing wall.

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26. (original) The radiant heat system set forth in claim 14, and further comprising an edge spacer and a standing wall, and wherein said multiple panels define an outer perimeter, said wall defines an inner perimeter, and said edge spacer is between said outer perimeter and said inner perimeter.

27. (original) The radiant heat system set forth in claim 14, wherein said panel has an outer surface and said outer surface defines a standing wall.

28. (original) The radiant heat system set forth in claim 14, wherein said panel has an outer surface and said outer surface defines a ceiling.

29. (currently amended) A method of forming a radiant heat system comprising the steps of:
providing an under-layer having a given area;
providing multiple panels ~~having a thermal mass, each of said panels comprising a formed tray defining a containment space and a conduit channel, said space containing a thermal mass;~~
providing conduit;
positioning said conduit over or under said under-layer in a predetermined pattern corresponding to said conduit channels;

positioning said panels over or under said under-layer such that said conduit extends through at least a portion of said conduit channels of said panels.

30. (original) The method of forming a radiant heat system set forth in claim 29, and further comprising the step of attaching said panel to said under-layer.

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31. (original) The method of forming a radiant heat system set forth in claim 29, and further comprising the step of attaching said conduit to an apparatus for heating fluid flowing through said conduit.

32. (original) The method of forming a radiant heat system set forth in claim 29, and further comprising the step of using a filler substance to fill a fault or irregularity in said under-layer.

33. (original) The method of forming a radiant heat system set forth in claim 29, wherein said panels are positioned over said under-layer and further comprising the step of positioning an over-layer over said panels.

34. (original) The method of forming a radiant heat system set forth in claim 29, and further comprising the steps of providing an attachment spacer and positioning said attachment spacer adjacent at least one of said panels.

35. (original) The method of forming a radiant heat system set forth in claim 34, and further comprising the step of attaching said attachment spacer to said under-layer.

36. (currently amended) The method of forming a radiant heat system set forth in claim 34-35, wherein said panels are positioned over said under-layer and further comprising the step of providing an over-layer.

37. (original) The method of forming a radiant heat system set forth in claim 36, and further comprising the step of attaching said over-layer to said attachment spacer.

38. (new) A radiant heat system comprising:

multiple radiant heat transfer panels;

each of said panels having a thermal mass and a conduit channel;

a wood attachment spacer;

a fluid conduit;

said conduit communicating with an apparatus for heating a fluid flowing through said conduit;

said multiple panels and said attachment spacer positioned adjacent each other such that said conduit extends through a series of said conduit channels;

said panels, conduit and apparatus configured and arranged to permit heat transfer from said fluid to said thermal mass of said panel;

whereby heat radiates from said panels.

attachment spacer is the trussing principle

39. (new) A radiant heat system comprising:

multiple radiant heat transfer panels;

each of said panels having a thermal mass and a conduit channel;

an attachment spacer;
an over-layer attached to said attachment spacer by mechanical fastener;
a fluid conduit;
said conduit communicating with an apparatus for heating a fluid flowing through said conduit;
said multiple panels and said attachment spacer positioned adjacent each other such that said conduit extends through a series of said conduit channels;
said panels, conduit and apparatus configured and arranged to permit heat transfer from said fluid to said thermal mass;
whereby heat radiates from said panels.

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40. (new) A method of forming a radiant heat system comprising the steps of:

providing an under-layer having a given area;
using a filler substance to fill a fault or irregularity in said under-layer;
providing multiple panels having a thermal mass and a conduit channel;
providing conduit;
positioning said conduit over or under said under-layer in a predetermined pattern corresponding to said conduit channels;
positioning said panels over or under said under-layer such that said conduit extends through at least a portion of said conduit channels of said panels.

41. (new) A method of forming a radiant heat system comprising the steps of:

providing an under-layer having a given area;

providing multiple panels having a thermal mass and a conduit channel;
providing conduit;
positioning said conduit over or under said under-layer in a predetermined pattern corresponding to said conduit channels;
positioning said panels over or under said under-layer such that said conduit extends through at least a portion of said conduit channels of said panels;
providing an attachment spacer;
positioning said attachment spacer adjacent at least one of said panels.

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42. (new) The method of forming a radiant heat system set forth in claim 41, and further comprising the step of attaching said attachment spacer to said under-layer.

43. (new) The method of forming a radiant heat system set forth in claim 42, wherein said panels are positioned over said under-layer and further comprising the step of providing an over-layer.

44. (new) The method of forming a radiant heat system set forth in claim 43, and further comprising the step of attaching said over-layer to said attachment spacer.